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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,150	03/24/2004	James H. DeVore	60,446-244; 03ZFM046	5266

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EXAMINER	
BONCK, RODNEY H	

ART UNIT	PAPER NUMBER
3681	

DATE MAILED: 08/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/808,150	DEVORE ET AL.	
	Examiner	Art Unit	
	Rodney H. Bonck	3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The following is a first action on the merits of application Serial No.10/808,150, filed March 24, 2005.

Specification

The disclosure is objected to because of the following informalities:

In line 2 of page 9, "need" apparently should be – needed --. In line 3 of page 9, "a" apparently should be – and --.

Appropriate correction is required.

Claim Objections

Claim 5 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 5 calls for determining the first and second reference points in terms of engine revolutions per minute. Claim 1, though, already recites the step of determining the first reference point and the second reference point based on data from steps (a) and (b), step (a) being engine output shaft speed, *i.e.,* engine revolutions per minute. Thus claim 5 does not appear to further limit claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Braun('891). Braun discloses a clutch control method in which engine speed is monitored at 20, transmission input speed is monitored at 24, a clutch operation command is generated at 19,30, a first reference point (point of incipient engagement) and a second reference point (point of full engagement) are determined based on the engine speed and transmission input speed, and an appropriate rate of clutch engagement is determined (modulated engagement between the first and second reference points, see col. 7, lines 36-59). The data for determining the reference points are constantly updated, which includes following a service event, thus accounting and adjusting for wear.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braun('891) in view of Otto(US 2002/0096416 A1). Braun lacks the claimed step of a plausibility check. Otto discloses a clutch control arrangement and teaches performing a plausibility check (paragraph [0031]). It would have been obvious to perform a plausibility check in the Braun device, the motivation being to determine that the system is within predetermined parameters. It would have been obvious to generate a warning signal in the Braun device if a plausibility check fails, the motivation being to alert the driver of the likelihood of a system malfunction.

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braun('8910 in view of Chan('462). The method of Braun does not appear to optimize depending on desired clutch responsiveness as opposed to comfort. The Chan control provides for selecting between modes of operation wherein engagement rate is

optimized according to desired performance, taking into account the driver's desire for comfort or responsiveness. It would have been obvious to provide for such optimization in the Braun device, the motivation being to allow the driver to adapt the system to the desired performance.

Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braun('891) in view of Fowler et al.(US 2004/0025617 A1). The Braun method does not appear to provide for determining drive-off torque based on vehicle parameters, such as weight or gradient. Fowler et al. teach determining such parameters as vehicle weight and road gradient (see paragraphs [0015] to [0021]) in controlling the vehicle transmission system. It would have been obvious to take these parameters into consideration in the control of Braun, the motivation being to optimize performance regardless of varying conditions.

Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braun('891) in view of Shirley('770) and Tellert('625). The Braun method compensates for wear but does not appear to generate a clutch history or alert the driver of clutch condition. Shirley discloses a control arrangement that generates a vehicle system history and controls systems according to comparisons between sensed and historical values. Tellert discloses a clutch control which compensates for clutch wear and generates a signal indicative of clutch condition, which in effect is a prediction of remaining service life. From the combined teachings of Shirley and Tellert, it would

have been obvious to modify Braun to compile a clutch history to take into account during clutch control and to determine the status of clutch wear and alert the driver accordingly, the motivation being to prevent damaging use of the clutch beyond its wear limit.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Oltean et al.('874) and Kohno et al.('174) are cited to show their clutch control methods. Drexl et al.('909) and Satoh et al.('832) show other clutch control devices.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney H. Bonck whose telephone number is (571) 272-7089. The examiner can normally be reached on Monday-Friday 7:00AM - 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Rodney H. Bonck
Primary Examiner
Art Unit 3681

rhb
August 24, 2005